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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/031,241	01/17/2002	Bernhard Hauer	50531	6324

7590 08/12/2003
Keil & Weinkauff
1350 Connecticut Ave, N.W
Washington, DC 20036

EXAMINER

PAK, YONG D

ART UNIT	PAPER NUMBER
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1652

DATE MAILED: 08/12/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/031,241

Applicant(s)

HAUER ET AL.

Examiner

Yong D Pak

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 1-10, 13-15 and 19-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-12 and 16-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other: _____.

DETAILED ACTION

This application is a 371 of PCT/EP00/07251.

Claims 1-22 are pending.

Election/Restrictions

Applicant's election with traverse of Group II in Paper No. 11 is acknowledged. The traversal is on the ground(s) that unity of invention might not be present since multiple processes are present in the application. This is true. Since multiple processes, processes of manufacture or uses are claimed, are present, the first invention of the category first mentioned in the claims of the application and the first recited invention of each of the other categories related thereto will be considered as the main invention in the claims, see PCT Article 17(3)(a) and § 1.476(c). Group I is drawn to the first recited product and the first recited process of using the product. Group II is drawn to the second recited process of using the first product. Group IV is drawn to the third recited process of using the first recited product. Group III is drawn to the second recited product.

The examiner notes that claims 13-15 of Group I, drawn to a method for the enzymatic transfer of oxygen is listed among the claims of Group II, a method of producing fatty acids. Only claims 11-12 and 16-18 should be listed in Group II.

Claims 1-10, 13-15 and 19-22 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 11.

Claim Objections

Claim 11 is objected to as being dependent upon a non-elected base claim, and should be rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 11 has been interpreted to include all the limitations of its base claim and any intervening claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-12 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Estabrook et al. in view of Sargeson et al.

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Estabrook et al. (PTO-1449) teach a method of enzymatic ω -hydroxylation of lauric acid by using a mediator to transfer electrons from the electrode to a P450 enzyme (pages 44-48). Estabrook et al. teach that catalase can be added to the reaction to decrease the rate of peroxide (50). The mediator used in the hydroxylation is a caged cobalt complex called a cobalt sepulchrate³⁺.

The difference between the reference of Estabrook et al. and the instant invention is that the reference of Estabrook et al. does not teach a method of hydroxylating fatty acids using Zinc dust as the source of electrons.

Sargeson et al. (U.S. Patent No. 4,497,737) teach a caged cobalt sepulchrate that is identical to the cobalt sepulchrate used in the instant invention (Column 4). Sargeson et al. teach that this caged complex can be used with Zinc dust coupled with HCl (Column 4 and Creaser et al., pages 3181-3182). It is well known in the art that Zinc serves as reductants. Sargeson et al. teach that the caged metal complex have uses as inert oxidation-reduction reagents in inorganic and organic oxidation and reduction reactions (Column 4).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the claimed invention was made to use the Zn/Cobalt sepulchrate complex of Sargeson et al. to hydroxylate fatty acids. An alternative to using electrodes as a source of electrons is attractive since irreversible adsorption of protein constituents leading to electrode fouling and protein denaturation may occur. One of ordinary skill in the art would have had a reasonable expectation of success since cobalt sepulchrates

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are well known and used as electron mediators and Zinc is well known and used in the art as reductants.

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yong Pak whose telephone number is 703-308-9363. The examiner can normally be reached on 6:30 A.M. to 5:00 P.M. Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapu Achutamurthy can be reached on 703-308-3804. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9307 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

Yong D. Pak
Patent Examiner

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Yong D. Pak
Patent Examiner


PONNATHAPU ACHUTAMURTHY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600